

January 21, 2003

**RE: Steel Dynamics, Inc. 033-16638-00043**

TO: Interested Parties / Applicant

FROM: Paul Dubenetzky  
Chief, Permits Branch  
Office of Air Quality

## Notice of Decision - Approval

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to 326 IAC 2, this approval was effective immediately upon submittal of the application.

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office Environmental Adjudication, ISTA Building, 150 W. Market Street, Suite 618, Indianapolis, IN 46204, **within eighteen (18) calendar days from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We make Indiana a cleaner, healthier place to live.*

Frank O'Bannon  
Governor

Lori F. Kaplan  
Commissioner

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[www.in.gov/idem](http://www.in.gov/idem)

January 21, 2003

Barry Smith  
Steel Dynamics, Inc.  
4500 County Road 59  
Butler, Indiana 46721

Dear Barry Smith:

Re: Exempt Construction and Operation Status,  
033-16638-00043

The application from Steel Dynamics, Inc., received on January 06, 2003, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following conveying and crushing operation, to be located at 4500 County Road 59, Butler, Indiana 46721, is classified as exempt from air pollution permit requirements:

- (a) two (2) conveyors, identified as #10 and #11, with a maximum capacity of 50 tons of slag material per hour each, using water spraying as control to minimize dust.
- (b) one (1) jaw crusher, with a maximum capacity of 100 tons of slag material per hour.

This equipment is owned and operated by Edward C. Levy Company – Butler Mill Service, (the SDI's slag processing contractor) at its Butler Mill plant located on SDI property.

The following conditions shall be applicable:

- (1) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:
  - (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
  - (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.
- (2) Pursuant to 326 IAC 6-3-2 Particulate Emission Limitations for Manufacturing Processes, the particulate emissions from the two conveyors shall be limited to 44.57 pounds per hour each based on a process weight rate of 50 tons per hour and the following:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40$$

where E = rate of emission in pounds per hour and  
P = process weight rate in tons per hour

Pursuant to 326 IAC 6-3-2 Particulate Emission Limitations for Manufacturing Processes, the particulate emissions from the jaw crusher shall be limited to 51.27 pounds per hour based on a process weight rate of 100 tons per hour and the following:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40$$

where E = rate of emission in pounds per hour and  
P = process weight rate in tons per hour

This existing source has submitted their Part 70 application 033-8063-00043 on January 03, 1997. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original Signed by Paul Dubenetzky  
Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

GS

cc: File - DeKalb County  
DeKalb County Health Department  
Air Compliance – Richard Sekula  
Northern Regional Office  
Permit Tracking – Sara Cloe  
Technical Support and Modeling - Michele Boner  
Compliance Data Section - Karen Nowak  
Part 70 Application File - T-033-8068-00043  
Part 70 Reviewer – Gail McGarrity

## **Indiana Department of Environmental Management Office of Air Quality**

### **Technical Support Document (TSD) for a Exemption**

#### **Source Background and Description**

<b>Source Name:</b>	<b>Steel Dynamics, Inc.</b>
<b>Source Location:</b>	<b>4500 County Road 59, Butler, Indiana 46721</b>
<b>County:</b>	<b>DeKalb</b>
<b>SIC Code:</b>	<b>3312</b>
<b>Operation Permit No.:</b>	<b>T033-8068-00043</b>
<b>Operation Permit Issuance Date:</b>	<b>Not yet issued</b>
<b>Exemption No.:</b>	<b>033-16638-00043</b>
<b>Permit Reviewer:</b>	<b>Gurinder Saini</b>

The Office of Air Quality (OAQ) has reviewed an application from Steel Dynamics, Inc. (SDI) relating to the construction and operation of a new crusher and conveyors at the slag processing facility at the existing steel plant.

#### **Permitted Emission Units and Pollution Control Equipment**

The source consists of the following permitted emission units and pollution control devices:

- (a) two (2) conveyors, identified as #10 and #11, with a maximum capacity of 50 tons of slag material per hour each, using water spraying as control to minimize dust.
- (b) one (1) jaw crusher, with a maximum capacity of 100 tons of slag material per hour.

This equipment is owned and operated by Edward C. Levy Company – Butler Mill Service, (the SDI's slag processing contractor) at its Butler Mill plant located on SDI property.

#### **Existing Approvals**

The source has been operating under previous approvals including, but not limited to, the following (relevant to the affected process in this application):

- (a) CP 033-3692-00043, issued on October 07, 1994.

#### **Enforcement Issue**

There are no enforcement actions pending.

#### **Recommendation**

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on January 06, 2003.

## Emission Calculations

See Appendix A page 1 of 1 of this document for detailed emissions calculations.

## Potential To Emit Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	3.46
PM-10	2.8
SO <sub>2</sub>	-
VOC	-
CO	-
NO <sub>x</sub>	-

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants are less than the levels listed in 326 IAC 2-1.1-3(d)(1). Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3.

## County Attainment Status

The source is located in DeKalb County.

Pollutant	Status
PM-10	Attainment
SO <sub>2</sub>	Attainment
NO <sub>2</sub>	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. DeKalb County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) DeKalb County has been classified as attainment or unclassifiable for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

## Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited or actual emissions):

Pollutant	Emissions (tons/year)
PM-10	127
SO <sub>2</sub>	117
VOC	75
CO	540
NO <sub>x</sub>	719

- (a) This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the 28 listed source categories.
- (b) The data in this table is based upon the reported emissions for the year 2000.

### Part 70 Permit Determination

#### 326 IAC 2-7 (Part 70 Permit Program)

This existing source has submitted their Part 70 033-8068-00043 application on January 03, 1997. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

### Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

### State Rule Applicability

#### 326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

#### 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

The particulate emissions from the two conveyors shall be limited to 44.57 pounds per hour each based on a process weight rate of 50 tons per hour and the following:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40$$

where E = rate of emission in pounds per hour and  
P = process weight rate in tons per hour

Based on the attached calculations in the Appendix A, the uncontrolled potential to emit for the PM from each conveyor is 0.15 pounds per hour. Therefore, this equipment will comply with the applicable rule

The particulate emissions from the jaw crusher shall be limited to 51.27 pounds per hour based on a process weight rate of 100 tons per hour and the following:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40$$

where E = rate of emission in pounds per hour and  
P = process weight rate in tons per hour

Based on the attached calculations in the Appendix A, the uncontrolled potential to emit for the PM from jaw crusher is 0.5 pounds per hour. Therefore, this equipment will comply with the applicable rule

## **Conclusion**

The construction and operation of the two conveyors and a jaw crusher shall be subject to the conditions of the attached proposed exemption 033-16638-00043.

**Appendix A: Emissions Calculations**  
**two crushers with 50 tons per hour each and one jaw crusher 100 tons per hour each**

Page 1 of 1 TSD App A

**Company Name: Steel Dynamics, Inc.**  
**Address City IN Zip: 4500 County Road 59, Butler, IN 46721**  
**CP: 033-16638**  
**Plt ID: 033-00043**  
**Reviewer: GS**  
**Date: 01/08/2003**

**Potential to Emit for Particulate Matter (PM)**

Emission unit	Max. Throughput tons/hour	Uncontrolled Emission Factor* lb/ton	Controlled Emission Factor* lb/ton	Uncontrolled Emissions		Controlled Emissions	
				lb/hour	tons/year	lb/hour	tons/year
Conveyor #10	50	0.0029	0.0001	0.15	0.64	0.01	0.02
Conveyor #11	50	0.0029	0.0001	0.15	0.64	0.01	0.02
Jaw Crusher**	100	0.005	0.0012	0.50	2.19	0.12	0.53
<b>Total</b>					<b>3.46</b>		<b>0.57</b>

\* PM emission factor estimated by multiplying PM10 emission factors by 2.1 as per AP-42 Table 11.19.2-2 footnote c.

\*\* Tertiary emission factors were used as being the worse case scenario.

**Potential to Emit for Particulate Matter with diameter less than 10 micron (PM10)**

Emission unit	Max. Throughput tons/hour	Uncontrolled Emission Factor* lb/ton	Controlled Emission Factor* lb/ton	Uncontrolled Emissions		Controlled Emissions	
				lb/hour	tons/year	lb/hour	tons/year
Conveyor #10	50	0.0014	0.000048	0.07	0.31	0.00	0.01
Conveyor #11	50	0.0014	0.000048	0.07	0.31	0.00	0.01
Jaw Crusher**	100	0.005	0.00059	0.50	2.19	0.06	0.26
<b>Total</b>					<b>2.80</b>		<b>0.28</b>

\* PM10 emission factor as per AP-42 Table 11.19.2-2

\*\* Tertiary emission factors were used as being the worse case scenario.